REMARKS

Reconsideration of the above-captioned application is respectfully requested.

Claim 13 has been amended to more clearly distinguish over the Ginsburg reference, and a new independent claim 18 has been presented which also distinguishes over Ginsburg.

The present invention relates to a catheter that is insertable into a blood vessel and includes an external deflector arrangement intended to interact with the force of blood flow to displace the catheter body laterally toward a region of a wall of the blood vessel. That is, the resultant of all forces acting on the deflector arrangement is directed to displace the catheter laterally.

In the preferred embodiments, the deflector arrangement comprises a plurality of fins, each of which reacts separately with the blood flow to produce a force, and wherein the result of the forces acting on all fins is a lateral displacement of the catheter.

In contrast, Ginsburg discloses a balloon type catheter that can be expanded by heated or cooled fluid in order to warm or cool a patient's blood. In order to increase the outer surface area of the balloon 70, the balloon's outer surface is provided with external projections, i.e., either longitudinal fins 75 (Figs. 7, 8A), or radial ribs 77 (Fig. 8B), or a spiral fin 79 (Fig. 8C). As the catheter is being advanced through a blood vessel, the fins 75, the ribs 77, or the spiral fin will naturally interact with blood flow. However, Ginsburg has no reason for wanting the catheter to be deflected laterally, so the projections are designed to avoid creating a resultant force that would produce lateral deflection. That is, the fins 75, since they are oriented longitudinally, will not produce lateral forces. The radial ribs 77 will produce

longitudinally directed forces. The spiral fin 79 has a number of turns, some of which are inclined in one direction relative to the blood flow (shown in solid lines in the attached marked-up copy of Ginsburg's Fig. 8C), and the others of which are inclined in the opposite direction relative to the blood flow (shown in broken lines in the attachment). Thus, the lateral forces F created by the solid-line turns of the rib will be offset by the forces F' produced by the broken-line turns of the rib.

Accordingly, it is submitted that there is no disclosure of the presently claimed invention in Ginsburg, nor any motivation for incorporating the invention in Ginsburg's catheter, whereby claim 1 distinguishes patentably over Ginsburg.

New dependent claim 17 recites that the fins are oriented at an oblique angle relative to a longitudinal center axis of the catheter (thereby excluding the longitudinal fins 75 and the radial ribs 77 of Ginsburg), and that all fins are oriented to be deflected toward the same region of the vessel wall by the blood flow. As pointed out above, even if the solid-line turns of Ginsburg's spiral fin were considered to constitute separate fins from the broken-line turns, the solid-line turns tend to be displaced in an opposite direction from the broken-line turns, in direct contrast to the presently claimed invention. Accordingly, it is submitted that claim 17 distinguishes patentably over Ginsburg.

New independent claim 18 focuses on the fact that in Ginsburg, the projections 75, 77, 79 are formed on an inflatable balloon and thus are intended to be moved outwardly away from the section of the catheter's longitudinal center axis that passes through the balloon. In contrast, the fins of the present invention are not disposed on a balloon and are thus fixed against movement relative to the section of the center axis passing between the fins. Since the purpose of Ginsburg's

projections is to increase the surface area of the balloon, there would be no motivation to utilize Ginsburg's projections on a catheter unless they were disposed on a balloon. Accordingly, it is submitted that claim 18 distinguishes patentably over Ginsburg.

The description has been amended to provide antecedent basis for language added to claim 1 which is clearly supported by the original disclosure. That is, in order for the catheter to be laterally deflected, it is inherent that the resultant of all forces acting on the deflector structure must have a laterally directed component. The oblique angle referred to in new claim 17 is already supported by line 3 of paragraph 0024. The language of claim 18 describes an inherent characteristic of the catheter since the fins are disclosed as affixed to the catheter body, not to a separate balloon.

In light of the foregoing, it is submitted that the application is in condition for allowance.

Respectfully submitted,

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